

MEMORANDUM

TO: Kinsey O'Shea, Town Planner, Planning and Building Department

FROM: Joshua Middleton, Town Engineer

DATE: October 11, 2018

SUBJECT: 1222 Patrick Henry PRD – Transportation Comments
RE: Revised Traffic Study dated 10-2-18

Traffic Study

Provided with the original rezoning application is a 10th Edition Trip Generation analysis, two (2) day traffic count and turn lane warrants for the proposed entrance connections on Patrick Henry Drive. A Level of Service (LOS) analysis of the signal at the intersection of Patrick Henry Drive / Progress Street was also performed. Due to requested changes and a revision of the proposed entrance designs, from limited to full access on Patrick Henry, the following information was added or updated in the traffic study.

- 1) The trip reduction adjustment was reduced from 25% to 20% to better represent the site's overall trip generation and impacts.
- 2) Turn lane warrants were revised to reflect the appropriate AM and PM peak existing traffic volumes on Patrick Henry Drive.
- 3) A Level of Service (LOS) analysis was included for the intersection of Patrick Henry Drive / North Main Street to account for the increased traffic at the intersection. The addition of the development's traffic on the signal will slightly decrease the current LOS, however, this decrease is negligible and the signal, at buildout, will continue to operate at the current level of service and satisfies the requirements of § 5-307 of the Subdivision Ordinance.
- 4) Additional turn lane warrants were included for the left turn movement for both intersections from Patrick Henry Drive into the development. As proposed, the left turn volumes would not warrant a left turn lane from Patrick Henry Drive and do not fall within the 10% threshold of the warrant.

No additional revisions would be required for the Traffic Study. However, it should be noted that the proposed entrance design provides for a left movement into both proposed entrances. If it was determined or desired that either entrance restrict the left movement the addition of all left movements at either single entrance will likely trigger the warrant for a left turn lane. Per the proposed full access entrance designs the conclusions presented in the revised traffic study have been confirmed.

- The proposed project will increase traffic on the surrounding road network.
- Traffic increases at the Progress Street / Patrick Henry Drive and Patrick Henry / North main Street intersection will have a negligible impact on level of service (LOS) and no timing adjustments would seem warranted.
- Right turn lanes and/or tapers for the proposed entrances to the site would not be warranted.
- Left turn lanes for the proposed entrances to the site would not be warranted.